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GOOD HEALTH

DENTAL WELFARE

BREAST FED BABY

BEST ABLE TO EVADE DISEASE

OFFICE OF THE ... BOOKS
No.
15 JAN 192
MADRAS

A Monthly Journal for Health when Young and Ever After.

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Our Children's Fate in Public Schools

HABITUAL TYPE OF A MOUTH-BREATHER AFFECTED WITH ADENOIDS

In this subject, aged 9 years we can notice high forehead & scarred facial Expression.

JAW-FACIAL DEFORMITIONS IN A MOUTH-BREATHER

Very pronounced gaping of mouth, prutrusion of upper lip and jaw bone, marked lower lip and lower jaw retrusion.

Protruding Upper Teeth found mostly among the Bottlefed Female children who fall prey to Tooth Defects and Deformities, Eye, Throat and Ear Troubles agravated by School Education.

Mouth Breathing and Consequences-Adenoids and under developed chest and Lung Complaints.

Case of Delayed Dentition of upper central incisors-Child of 8 years, having lost the temporary but not having yet cut permanent ones; quite common now-a-days.

OFFICE OF THE REGISTRAR OF BOOKS
15 JAN 1925
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GOOD HEALTH AND DENTAL WELFARE

A Monthly Journal for
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The Health of Children is the Wealth of Nations

Being an address recently delivered by the Editor to the Students of the "National College," Trichinopoly.

I am glad for having got this opportunity of addressing such a big gathering of students and Teachers. Though you all value your Text Books and promotions for making up a great future, the subject I treat of to-day is sure to make your great future still greater. I mean your "Health". Your health when young is of course more important nay neccessary to make your health sound, when old.

Friends, I must be plain in saying that the authorities till now have only had their anxiety in trying to make you mental giants and in most cases only body pigmies. It is however excusable in as much as the morally bound people, I mean medical profession, have not yet come to rescue the student population and bring this fact to the knowledge of the authorities and guardians who shapen the destinies of our children during school days. You all are aware that the three persons who have to take immediate care of children now-a-days are the father, mother and the teacher. The father in most cases has to earn the bread for the family and thus generally excuses himself in failing to take proper care of his child. The mother is generally ignorant, if not illiterate, and hence the child's health or ill-health depends upon the vigilence kept by his Teachers. It is also true that children spend most of their wake hours within the four walls of a school or under the care of a Teacher and hence a Teacher is by duty bound to keep his eyes open to direct the child in matters of its health. But we generally find that Teacher pays least attention to this most important subject and pays the greatest attention to factors which make the child lose its health and shorten its life viz. excercise of the brain around inimical forces, often at the expense of the body growth.

But you all will admit that the "*Health of the children is the wealth of Nations*" and hence has to be protected by all concerned-the state, the city, the parents, the teachers and no less by the

morally bound Medical and Dental professions. Each is expected to do his own duty in his own legitimate way. The children have to be looked upon or respected as the future asset of a nation and no pains spared for the preservation of their Health and protection of their lives.

It is also a fact that the health and longevity of the child depend much upon the attention and protection it received in its prenatal stage (i. e. in the womb life) as well as upon the health and vitality of the parents during its germinating time. This fact has been lately engaging the attention of "*Child Welfare*" and "*Maternity*" Propagandists and a good beginning has been done especially in Madras and some moffusil cities. The subject however needs seperate elucidation at a seperate period.

Gentleman, I will to-day confine myself to the *General Health* Education of our children in public schools. It is to be greatly deplored that with all factors to curb the body growth and shorten life, there is no safe-guard among our present day educational methods to minimise their evil effects and due attention is not being paid by the authorities to this important subject which is as neccessary to ensure a sound mind which is only possible in a sound body,

The most important subject that has staggered the medical world at present (may be some elders even) is the increasing of Tooth Troubles especially among our educated and educating younger generations and the consequences or havoc wrought by such Tooth Troubles when young or later are still more appalling. The medical profession have at last discovered that Dental Decay and foul mouth are the causes or consequences of almost all diseases known to the medical world. It requires no imagination to bring this fact home to the lay man, if he takes it into consideration that all the food he takes and part of the air breathed in get contaminated by the foul mouth and Diseased Teeth, and that germs in mouth can be and are easily and indirectly carried away into all organs of the body through the rich blood vessels found in mouth and tongue. Not going deep into the subject, it is enough to say that cure of Tooth Troubles or its consequences is a long and sometimes hopeless process but *prevention and cure* in its early stages are easy and commendable. It is that fact that has made me go from place to place and address students and teachers rather than would-be patients who can look after themselves and pay easily for their negligent actions when young or later.

The great factors governing the Health and welfare of Human Body as well as Teeth are *Right food, proper exercise, fresh air and water and sunlight.* It can be said that all these are being denied to our student population by many an unforeseen or unavoidable circumstances. Rather it is inefficiency and insufficiency of these factors that have under-mined the Health and welfare of student population.

Prevention of general ill health means also the preservation of welfare of Teeth. Food and exercise are intimately associated with the growth of teeth and prevention of *Dental Caries;* and of all Health Propaganda, Dental Propaganda is quite essential for the upkeep of Health among the present day student population. For it is again wrong food and feeding which are the cause of all their ills and evils. With an early and hurry burry

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principal meal before 9 A.M. in the morning, you begin school work when the stomach is over-loaded and working, and when the brain receives less blood and refuses to work. The result is that stomach troubles and nervous debility are the consequences of morning school work after a heavy meal. It is a fact known to all teachers and student population that the brain refuses to work from 10 to 1 P.M. and that most if not all students in a class are half or full asleep from 10 A.M. on ward. If any so-called intelligent or precocious try to resist this, they generally fall victim to stomach troubles and stunted growth, on account of the tug of war between the working stomach and brain. It is such students that never taste their natural foods properly, have a voracious appetite for artificial and poisons foods as Tea, Coffee, and "Palaharams" and invariably shorten their lives during their promising bright future career. The dull headed however obeying Nature's order allow the brain rest and with eyes shut or half open have dreamy knowledge of the lectures forced upon an unwilling and unprepared mental faculty.

"*Food and Feeding*" is an important and too extensive subject to be dealt with here in detail but it is enough to say that the stuff available and partaken off by the student population in big cities as milled rice, tinned foods, Coffee hotel 'Palaharams' are the root cause of all Tooth Troubles. Consequently in a big city, it is no exaggeration to say that 95% of students do suffer from Tooth Troubles potent or apparent and 25 per cent at least are suffering from effects of Tooth Troubles such as Eye defect, Throat Troubles, Ear Troubles and nose obstruction.

Even in a moffusil college as this, I have been pained to be able, even at a glance, to pick up some pitiable students among the audience and you will be astonished to see that they do suffer from Tooth defects, as Protruding and Irregular Teeth, Gaping mouth, Retained milk Teeth, Caries of Teeth, Foul mouth, which have not been diagnosed by the medical attendent who prescribed to try to cure the consequences as "myopia" (short sight) Throat defects etc. You will however excuse me in pointing out such cases with the best intention of drawing the attention of their parents to their direlection of duty for which the innocent child has been made to pay for. Till late however as in the story of the Elephant and the seven blind men, each examining one single part of the whole, described the thing as each blindly perceived. It is not to be diagnised seperately as a case of 'adenoids', 'mouth Breathing', 'Dental Caries' Nose Obstruction, but all have to be perceived with one's eyes' open and find out the root cause of the maladies, the several symptoms being considered only as external manifestations of a severer internal disease.

To start with the ground is paved smooth by the ignorance of the consequences of breaking Nature's Laws of Health. Among most of the Educated, the baby fails to receive its birthright of mother's milk and is generally fed on artifical food, which is handy and being extensively advertised as even superior and safer than mother's or cow's milk. The objectionable feeding with clean or unclean Feeding bottle necessitates mouth being kept open and breathing performed through mouth and

due to such highly and fermenting artifical foods, and on account of the loss of jaw exercise-as in sucking the breast-all sorts of Tooth Troubles-*late eruption of Teeth, irregularity of Teeth, irregular meeting of Teeth, Dental Caries*-result. Mouth breathing leads to several diseases. Nose is made for breathing in fresh air, which is allowed to go in right measured quantity after being warmed or cooled to the normal temperature of body, by the rich blood vessels in the nose ; whereas if air gushes in through mouth in case of mouth breathing, the absence of this heating or equalising process will lead to affection of throat and lungs and hence swelling of throat (Adenoids and Tonsillitis) are the immediate results which may lead the child to all sorts of Lung Troubles, undeveloped chest etc. The nose being un-used, mouth being always used, the air rushing in presses the roof of the mouth upward and outwards, thereby obstructing the nasal doors and indirectly pressing the Eye ball and brain, causing Eye defects (especially myopia) when the child begins to exercise too much its organs of Eye sight.

Having the foundation for future Troubles, been thus laid safely and soundly, and having been brought up in such surroundings, the child at the school going age hates Natural foods, which require mastication and always goes for artificial foods, sweet drinks, which again feed on the appetite and bring on Stomach Troubles, Constipation, mal-nutrition and Brain fag. The stomach troubles, especially acid eructations, will attack on the young, tender and under-developed Teeth, whether already diseased or otherwise, and Dental Caries is the result. Hence Dental Troubles, Throat affections and Eye defects are the common complaint among almost all children studing in schools. Pain in the Teeth will discourage eating or chewing of hard foods and the exercise of mouth and jaw bones and added to that, absence of plenty of fresh air and water and absence of sunlight-which will always be evaded by such half starving children-will undermine the welfare of both Body and Teeth. It is no woder then that students now-a-days have poor appetite, irritable temper, irressistibility or obstinacy, poor or frail like constitutions, loss of sleep, palpitation of heart and neurasthenia and that even so called "bright" students fail to answer their papers in Examination or fail to come up to the mark in their public examinations and later in their promising public career.

Hence it is worth following and acting on the Axiom, "Prevention is better than Cure" in as much as Prevention costs pies when cure costs pounds. Prevention of Tooth Troubles follows in same line as Prevention of general Ill Health and breakdown of Health means sooner or later breakdown of Health of Teeth. Again like Tongue, Teeth is an indicator of Health or Ill health, potent or apparent. Hence Teeth have to be saved and kept in a healthy state even from young age.

Prevention of Tooth Troubles can be easily carried out by scrupulously avoiding or abhorring the enemies of Teeth as sweet foods and drinks, acid drugs, Tea, Tobacco, Coffee, Alcohol and by partaking of right foods-unmutilated and kept fresh as far as possible nearest to the natural or fibrous states, and by eating plenty of vegetables and fruits and by exercising the Teeth and jaw bones by mastication as well as by daily cleansing

of Teeth by such fibrous foods and fruits and by mechanical methods as Tooth Kuchi, Brushes, Powders, and fingers.

To ensure a success, one must always be enthusiastic and honest. But even to attempt to follow this ideal way of living will pay for. Hence children have to be taught the value, nay the necessity, of above four factors in order to prevent the diseases, in general and Tooth Troubles, in particular.

Thus you see that the infant should not be denied mother's milk and in the absence of such birthright, a wet nurse may be engaged, or else cow's milk (goat's and asses', milk also) may be given diluted with a little "Chunam" water. When the child gets its teeth, milk diet should be supplemented with hard foods as bread, ghee and rice, fruits etc., which the child can bite and suck. The artificial foods should always be avoided, so also sweet and sticky foods as biscuits, lozenges, Coffee, Tea Etc. The grown up boy should take only three meals a day with fruits or butter-milk during tiffin time or tiffins or "palaharams" must be finished with fruits or butter-milk. The frequent eating should be discouraged. The meals should be properly masticated and teeth cleansing foods as butter-milk should be taken last. Gargling of mouth should be encouraged after each meal or 'chota'. The bed coffee or as a matter of fact, such beverages should not be given at all to the young whose frail and irritable nervous system must be left unstimulated.

The teeth will be kept clean by following this kind of diet and feeding. They should also be cleaned every morning properly for sufficiently long time by Tooth Kuchis or a Tooth Brush and a Powder. Pastes are not required to any children at all and Pastes have always to be used only under proper dental advice. Paste is a waste in many a case, except when the gum is swollen and painful. All others have to use only good and scientific non-adherent and non-pungent Tooth Powder with a suitable Tooth Brush which has its bristles' end serrated and curved,

In fine, I may conclude by thanking you all for your patient hearing to me as well as in anticipation of your attempt to observe the following points which will surely and richly pay your small efforts.

1. Health Propaganda especially Dental Propaganda is to be made compulsary in all schools and colleges.

2. Prevention is Better than Cure. But Prevention of Tooth Troubles is more easily successful than similar work for the prevenfion of other Diseases or Consequences of Tooth Troubles.

3. Dental Caries is simply a sign of wrong living which produces innumerable bad results and hence Teachers should interest themselves in Health subjects and give short practical lessons to the children now and then,

4. The great factors that govern Health of Body and Teeth are Hard foods, sufficient exercise of body and jaw bones, fresh air and water and sunlight.

5. Teeth have to be kept clean and functioning. Since soft and fermenting foods left in crevices decay and eat away Teeth especially of children, Hard foods Tooth Kuchis, Tooth Brushes &c will dislodge harmful collection of foods and germs and keep the Teeth clean and working. For *a clean Tooth never Decays.*

Medical Inspection of Schools in Madras

By Rao Sahib Dr. U. RAMA RAU, M.L.C., F.M.U.

After, nearly, four years of delay, demur and disappointment, the Honourable the Minister for Education has placed before the public the outlines of his scheme for the medical inspection of schools in this Presidency. A good beginning though, the proposed scheme cannot be said to solve satisfactorily the many intricate and perplexing problems connected with the welfare of the children in general and the school-going population in particular. For, any scheme that starts with the school-children alone, ignoring their health-conditions during infancy or pre-natal period, is bound to fail. Without proper state control of supervision over the birth of children or their health during infancy we are sure to have a large percentage of physical wrecks admitted into schools with the result that the problem of safeguarding their lives at that stage and making them fit citizens of the future becomes a formidable task. Maternity and Child-Welfare, therefore, are neccessary and indespensable factors precedent to any scheme of Medical Inspection of schools and care of school-children. The proposed scheme of medical inspection of schools without the formulation and elaboration, previously made, of a scheme for Maternity and Child-Welfare will be something like putting the cart before the horse. So long as the Government have failed to make any real and earnest attempt as yet at instituting sufficient child-welfare centres in rural areas especially, and providing for the safety and well-being during their pre-natal and infant stages, there is no possibility of the appallingly high death-rate among infants now prevalent in this country ever declining, nor of enough vitality or power of resistance to diseases left among the surviving few. In all other civilized countries in the world, Maternity and Child-Welf are work has made such rapid strides that infant mortality is there now at a very low ebb. A curious incident is reported in the December 1923 issue of "Maternity and Child-Welfare", the official organ of the Central Council for Infant and Child-Welfare, pablished in London. At the Leicester Bankruptcy Court, an undertaker explained that his failure was due to bad trade and the following pathetic conversation that ensued depicts the sad tale of the undertaker and the triumphant result of the Child-Welfare work in that country.

"*The Official Receiver* :—Do you mean that the Medical Officer of Health has been too much for you?..........Do you seriously mean that people live longer?"

"*The Undertaker* :—Yes, certainly. There used to be certain seasons for babies funerals but the Infant Welfare Campaigns have beaten us."

This is a consummation devoutly to be wished for even in our own country. Would it ever happen, gaurded and guided as we are by the *Steel Frame* of the British—the very nation that has brought about such glorious result in their own homes, is too much for us at present to prophesy. Now, turning to the scheme on hand, the first and foremost defect is that the head of the Medical Department plays a prominent part in the conduct of affairs relating to the Medical Inspection Scheme. So far as we know, the Department of Public Health is the proper

authority which holds sway and control over this important and primarily health function. As between the Department of Public Health and the Department of Public Instruction, there is, however, some difference of opinion as to whether school medical inspection should be performed by the Health Department or the School Department, because these two interests bear upon the same problem. No doubt each department can present arguments why medical inspection should be under its supervision. Primarily, a large part of the work (communicable disease control) is solely the function of the Health Department, as the legal authority to do this work is lodged by law exclusively in the health authorities. The Surgeon-General with the Government of Madras who is the chief medical and not the health authority here, has no place whatsoever in the control of this work, beyond, perhaps, supplying the requisite medical officers and the venue of activity should, therefore, be changed to the Department of Public Health.

Secondly, the scheme is defective in that it expects the work to be done by medical officers of the rank of Civil Assistant Surgeon or Sub—Assistant Surgeon who have no special qualifications for the treatment of children's diseases which are of a peculiar nature. *Defective teeth* is the most frequently encountered physical defect among School-Children. Such a condition not only leads directly to a reduction of physical efficiency, but lays the foundation for systemic disorders which may result in premature death in early adult life. So, the school medical officer must necessarily be a bit of a dentist. *Diseased or hypertrophied tonsils and adenoids* are next most frequently encountered. Some large cities in Europe and America maintain special operative Tonsil and Adenoid Clinics for school children. Travelling clinics are also used effectively in rural parts. Even in this Presidency, such institutions should be maintained at convenient centres, manned by specially qualified medical officers if the system is at all to claim thoroughness and perfection. *Eye and ear defects* follow in frequency. Such defects are impediments to school progress as they directly impair the perceptive faculties. The existing common-place medical officers may not be quite competent to deal with such cases. Specialization in these particular disease is therefore essential. There are a large number of other miscellaneous defects which it is unnecessary for us to mention here. The medical officers appointed for the medical inspection of schools should undergo some sort of training in these special branches before they can be posted for this duty and must be constituted into a separate cadre independently of the ordinary medical line. In the present depleted state of finance of this Province, it may not be possible to provide special clinics for special diseases but medical officers trained by specialists for a particular period will be found more useful and serviceable.

The third defect in the proposed sheme is that diseased children examined and ousted from schools are left to their own fates and the Government wash off all further responsibility in respect of such children. Simply to discover a defect and call the parent's attention to it will accomplish little. Such a programme can get only a small percentage of defects corrected. There is also the further risk of children discontinuing their studies

altogether rather than undergo the ordeal of spending money and correcting the defects before the admission. Unless the school authorities on whom this duty is imposed also undertake the task of treating children free, and getting them cured of their ailments before re-admission, there will be witnessed the unhappy spectacle of mere empty benches in schools. It may be said "There are Government Hospitals. Why not seek admission there?" But the whims of parents—their superstitions and idiosyncracies—especially of the poor and illiterate class who constitute the major portion of the population in schools, will have to be overcome and it is no easy matter. Next comes the question of cost. We have nothing to do with the apportionment of expenditure in respect of the medical inspection of schools between the Government on the one hand and Local and Municipal bodies on the other. All that we object to is the proposal to levy a small fee on each pupil. Already education is costly in India, be it elementary, secondary or higher, and to saddle the poor parent with further expense is highly undesirable. The Government, the Local Boards or the management must find the wherewithal to meet the neccessary expenditure connected with the scheme and children should not be taxed for this purpose, however small it may be.

The last point we have to draw the attention of the authorities, is with regard to the condition of the schools themselves. Of course, under the scheme, the Inspecting officer is expected to report on the general sanitary condition of the schools and suggest ways to improve them. But we ask, "Are the existing institutions built on perfectly sanitary and hygienic principles?" Our answer is an emphatic "No." In America, there is an old story told of a traveller driving with a native through a rural district. As they passed through a dilapidated ramshackle old building, the traveller asked: "What place is this?" Oh! said the native, "that is only our school. If you want to see a fine, modern sanitary building, come, look at our jail." Condition of schools in India is no better. Common humanity demands that even law—breakers shall be decently treated while in confnement, but it is absurd to find fine jails and other public buildings and place our children in mean, overcrowded and ill-ventilated quarters for their schooling. Safe, wholesome drinking water is one fundamental requirement of every school and this is seldom provided. The question of housing school-children in sanitary dwellings must be first tackeed before any attempt is made to improve their lot, mentally and physically. We hope the Hon. the Minister for Education will not fail to give this aspect of the problem the prominence and importance it deserves but will first look to the schoolhouse and its sorroundings being kept in a perfectly sanitary condition before their inmates are touched.

The Imporence of Dental Treatment in Schools
(Dental Inspection of Schools)
by Mr. HUGO HAMMARLUND

There are two main factors in the establishment of School Clinics-one is the cost and the other the possibility of getting dentists. Of course, there are other important matters, for instance, the question of suitable accommodation etc.; but the most important factors are the question of finance and the possibility of getting dentists. Everywhere in the Scandinavian Dental Press appear advertisements for school dentists. This is more, especially the case in our sister country Norway. This country has lately been positively inundated with advertisements in regard to such positions. One can say in all seriousness that the necessity for getting school dentists has become a matter of vital importance. Not a stone is left unturned to get suitable dentists. It has even been proposed to employ unregistered dentists in order in this way to get hold of a sufficient number of dentists Everybody will understand the reason for this. In this direction Norway is a head of all the northern countries.

SWEDEN'S ONE MILLION SCHOOL CHILDREN

But the demand for school dentists in the other Scandinavian countries is also very great, Take, for instance, Sweden, with its one million school children. According to the recommendations of the Royal Commission which, in 1913, was instructed to work out a proposal for the organisation of school clinics, and whose report is dated August 15,1917, about 900 dentists were needed, and this during a period when the number of dentists in Sweden was 650. In the circumstances it was, of course, an impossibility to carry out a regular dental inspection, but the method was adopted of gradually regulating this by each parish being left to arrange the question of school dental inspection in the best way possible under prevailing conditions.

SCHOOL DENTAL INSPECTION IN SWEDEN

In Sweden are found many different stages of school dental inspection from the small parish where the dental Inspector is trained in his own home by a private dentist practising in the town, to the large parishes with a great number of children, and with surgeries with several dentists in charge, as, for instance, in Stockholm, Gothenburg and Malmo. Another form of dental inspection is for one parish in the country to ask a dentist living in a neighbouring village to come at certain times and do dental inspection work; an example of this is seen in Forssa in Helsingland.

In other words, even if there is not any law in Sweden by which school dental inspection is compulsory, the importance of dental inspection is so fully realised by the school authorities, teachers and parents that the great effort are made to meet the need. We have in Sweden about 80 parishes which in some form have introduced dental inspection in the schools, But there, as everywhere else, the need for dentists is apparent. The reason for this is quite clear, being partly that the dental inspection of children is rather a difficult subject to study (you will find

dentists who refuse to have anything to do with children at all), and partly that the remuneration which is offered to the dentist is very small in comparison with what he is able to earn as a private practitioner. The difficulty in getting dentists is thus one of the obstacles in establishing school dental inspection.

THE QUESTION OF FINANCE

Another obstacle, as already mentioned is the financial aspect. But this question is not so difficult to solve. On an average one may say that the entire care of a child's teeth costs Sweden between 7 and 9 kroner. This some may seem large enough, and there is no doubt that it can be brought down to about 4 kroner if the school dental inspection is arranged in a a simple and practical way. Four kroner is an expense which can be borne by every parish.

The question of accommodation is not so important as to constitute an obstacle in setting up school dental surgeries. As a rule, accmmodation for the surgery can be found in the school itself, which, of course, is the best, or in a place near to the school.

You will thus see that the main difficulty which we always have to face when schools are arranging for dental inspection, is the lack of suitable dentists. We shall, therefore, have to try to overcome this difficulty. It is possible that within the next ten years this may not be entirely accomplished, but we can lessen the effects of this difficulty a great deal, and the way in which it can be done is simply by a thorough organisation of the work at school clinics.

THE WORK OF A SCHOOL CLINIC

The work at a school clinic can be divided into two main parts-conservative and surgical dental inspection work, which is done by the dentist himself, and the other work which is done by the nurse in the clinic. In a clinic the dentist would, therefore, have to do the filling of the teeth, tooth extractions, root apex operations, and, possibly, prosthetic work (crowns, regulation of teeth etc.). All other work should be done by the nurse. I, therefore, confirm that all qualified dental inspection work should be done by the one who by his qualifications is fitted to do it, namely, the dentist, while all other work, which would be waste of time for him and where less experienced people can be employed, should be done by the nurse.

The method is, therefore, quite simple. When the dentist has as little as possible to do with each patient, he will be able to treat a greater number of patients in the same space of time than would otherwise be the case. A dentist should be able to keep one to three nurses busy, and what this means at a time when it is impossible to get a sufficient number of dentists, every-body will understand.

THE WORK OF THE NURSE

When the work of the dentist is limited to the least possible amount, what will the work of the nurse be?

The nurse, in addition to tidying the surgery before and after working hours. I presume that besides a nures there will be a school caretaker-must keep all the books, see that there are always plenty of patients, help at operations. supervise all brushing of teeth, insert rubberdam, give instructions in all questions of oral hygiene, in a way easily understood by a child, look after the financial side of the clinic, *remove all tartar, polish all*

fillings, in which case the nurse, of course, will have to use the necessary instruments.

To be able to do this the nurse will, of course, have to be properly trained. It is naturally understood that the time of training will be only short in comparison with that of the dentist; previous experience is not necessary, but what is wanted above all is a suitable hand, a quick intelligence and a good ground work to go on.

THE TRAINING OF NURSES IN SWEDEN

In Sweden, the committee for Regulating the Teaching of Dentistry, constituted by his Majesty the King, whose report was given on the 27th December, 1920, pointed out the possibility of this training of nurses, in as much as the committee proposed that nurses, should be trained in a School Clinic for six months, and later on should work six months at the Dental Institute. It appears to me, however, that the suggested time for teaching is too long. The course of instruction which the nurses at the Stockholm Elementary School Clinic have to go through before they obtain a post is two months, but I must here remark that this school does not give instruction in oral hygiene nor in polishing of fillings.

These nurses are taught book-keeping, preparation of the diffirent filling materials, the theory of tooth brushing and its practical application, some knowledge of antisepsis and asepsis (bacteriology), a slight knowledge of instruments, a superfical knowledge of the anatomy of the jaw and the teeth as well as the value of the contact pits in filling and articulation, meanwhile working in a School Clinic during the whole period of training. The training of the clinic nurse in dentistry should thus bear the same relation to that of the dentist, as does the training of the nurse to that of the doctor. Of course the training of a clinic nurse should be much shorter than that of a nurse, as her education is much less comprehensive. In my opinion, a training period six months is absolutely sufficient.

A clinic nurse trained in this way would be a great help to us dentists in the work of school dental treatment. She works under our supervision, does the work we choose to give her, prepares the patients for the work the dentist is going to do, and, as is most necessary in all school dental inspection work and all dental examination, sees that the patient has a clean mouth when he starts. I further wish to point out that these nurses are only educated for a work at a school dental clinic, where the dentist is always there to supervise.

There is still another branch of School Dental Inspection work which I have not yet mentioned, namely prophylactic work. Prophylactic dental inspection work along American lines has not yet been taken up in Scandinavia. But on account of the very good results of this method referred to in the American dental press, it appears to me not improbable that this method is so valuable that we will have to adopt it here in the North, and then clinic nurses will have to take their part in the work.

RESULTS OF THE SYSTEM

As an example of how much is gained through this method of distributing the work, I may mention that in the year 1920, 11 dentists and 10 nurses treated 11,900 children in Stockholm Elementary

Schools, without the nurse being as competent as above-mentioned, whereas in the year 1921 the same number of dentists and more competent nurses treated 16, 964 children, or 42 percent more than the year before, without the dentist having much more work to do. Considering that at the time the polishing of fillings was not done by the nurses, you will understand the importance of this sensible method of dividing the work. The result was such that I think this proposal ought to be considered in connection with the organisation of School Dental Treatment in a country.

In concludion, I beg to refer to an article: "Dentists and Clinic Nurses-Unrivalled Field of Activity in a school Dental Clinic" in *Odontologisk. Tiddskriff, April*, 1922.

Considering that school dental inspection is not only a question of conservative dental treatment, but even more a question of teaching oral hygiene or, on account of its results, a question of public hygiene, it will be easily understood why I maintain that conservative dental inspection work should be done by specially trained dentists, while oral hygiene work should be carried out by those trained in hygiene, in this case the nurses.

The modus operandi in a school dental clinic will therefore, be as follows:—The dentist does fillings, regulations, prosthetic work, surgical treatments and extractions, as well as medical treatment of gum and tooth trouble. The nurse does all the polishing of fillings, inserts rubberdam, removes tartar, does all disinfecting, all book-keeping, looks after the financial side of the clinic, as well as doing all other work which may turn up. When the work is divided in this way, the misuse of highly qualified labour is is obviated, and the dentist, who has the better education of the two, will be able to concentrate on the work which requires a better education-conservative tooth treatment. This enables the dentist to do more qualified work within a limited time, than if he had to employ the time over other work at the clinic. The remainder of the work-oral hygiene-has then to be carried out by the nurse, who is certainly very well educated in her way, even if her education is not as good as that of the more expensively trained nurse. It can thus be understood that a dentist is able to employ two or more nurses at his work, and everyone can see the importance of this, considering that we are able to get plenty of nurses, while the number of dentists is very limited.

The use made of nurses trained in this way in odontology has this advantage over other methods, that the nurse works under the dentist's supervision. There is no question of the nurse working on her own as a dentist, which might easily lead to confusion, but the nurse does what the dentist orders her to do and under his supervision. In other words, we have the assistance the dentist requires,

School dental treatment is, in this way, very economical, looked at from the financial point of view. The school dentist can, during the the time at his disposal, and for which he is paid, treat considerably more patients and carry our far more dental inspection work than would otherwise be the case. And this is very important from a financial point of view. The dentist is paid at the rate of 8 or 10 kroner per hour, and the nurses 1 or 2 kroner. But the main point of my argu-

ment dos not lie there. The main point of my argument is that dental inspection work at schools can be carried out in an absolutely satisfactory manner without employing more expensive and highly-skilled labour than absolutely necessary.

Oral Topics.

Mouth Hygienee

By Dr. C. D. WALLIS, L.D,S.R.C.S., M,I,H.

The function of healing, which by some thought to be chief duty of the medical and dental professions to-day, occupies the position of a last resort only in relation to other considerations.

Now organised efforts are being made all over the world to prevent disease, men of learning giving up their time and skill to discover valuable additions to our knowledge of preventive medicine.

Public health authorities everywhere consider it of greater importance to vaccinate members of a community threatend with an out break of smallpox or typhoid, etc., than to cure the individuals affected. Antitoxins are administered more frequently to prevent disease than to cure it. A surgeon frequently spends more time over antiseptic precautions than on the actual operation. Pure food laws and regulations are enforced, and good sanitary surroundings are created that people may receive proper nourishment and *keep* in good health.

All this, and more, is being done to Keep people well, and supplied with uncontaminated food, but only recently has the influence of a clean and healthy mouth been recognised as an All-importnt factor in the Prevention of disease and the building up of health.

Disease-producing bacteria normally present in every mouth, which is an ideal breeding ground for germs of all kinds.

The cavities in teeth broken down by decay form perfect incubators for the propagation of micro-organisms, which, multiplying with inconceivable rapidity, soon find their way into the digestive and alimentary tracts and general lymphatic system,

In a mouth containing carious teeth, more than a dozen different kinds of pathogenic organisms are to be found, including those of pneumonia, diptheria and tuberculosis. It is now fully recognised that systemic infection with tubercle bacilli takes place through the mouth and gastro-intestinal tract in fully 75 percent. of the cases; indeed a septic mouth with a carious teeth is considered by some authorities as of a greater importance than a poor family history. A child with a defective teeth is besides undoubtedly more easily a prey not only to these, but to many other infectious diseases, including measles, scarlet fever and influenza. Under these conditions, also septic material and germs are always in contact with the fauces and pharynx, this being one of the chief causes of enlarged tonsils, adenoids, ear diseases and other minor ailments. Almost half the diseases of children could certainly be avoided by thorough attention to a healthy state in the mouth from an early age. In addition, the unfortunate sufferer is largely incapacitated by auto-intoxication, both physically and mentally. The breath is

foul and offensive to bystanders, and yet has to be constantly inhaled by the unfortunate victim, the food is bolted, and the stomach, already irritated by constant poisoning, refuses to do its work properly, indigestion and an imperfectly nourished body resulting. As a consequence of bad teeth and an unsatisfactory condition in the mouth, a child's physical development is seriously hindered. This almost invariably leads also to lessened mental capacity. *The worse the teeth, the worse, as a rule, the position in School.*

Dental caries is the most common disease affecting civilised human beings. It affects all ages but is most prevalent in childhood and adolscence. It is also the most easily preventable. Its ravages may be very markedly reduced by keeping the mouth and teeth clean, and by vigorous use of the teeth themselves in mastication. The teeth should be cleaned, if possible after every meal, but at least twice a Day, morning and night, night-time being by far more important.

As it costs less to prevent teeth from decaying than to repair the damages once it has occured, frequent visits to a dentist are indicated in the interest of *prevention* of dental disease and toothache.

At birth a child has in its jaws the germs of some fifty teeth. Twenty of these are to be *deciduous* or milk teeth; the remainder belong to the *permanent* set.

We see therefore, that most of the teeth of an individual will ever have, are already commencing to form in the jaws at birth, and continue to grow and develop until the time of their eruption, when the crown (or exposed portion) is complete, the roots, however, not being completely formed until some two years after the tooth is out.

It is therefore perfectly clear that any diseased condition (locally) in the mouth or of the temperory teeth must be very apt to damage the delicate growing, partly-formed teeth embedded in the jaws. General disorders also, which affect the skin (e.g. exanthematous fever) or such as lead to continued malnutrition (and in these diseases, teeth themselves and the consequent imperfect mastication are the chief offenders) will so interferere with the proper growth and development of these forming teeth that when they are cut they will readily become a prey to the ravages of dental caries, especially if erupting into a mouth already affected by this disastrous disease and replete with infectious material.

The first temperory tooth to make its appearance in the mouth is the lower incisor about the age of six to seven months. The other temperory teeth erupt at intervals during the first two years of the child's life, at which age the temperory set is complete.

Many people fail to appreciate the necessity for retaining these teeth in healthy condition in the mouth. They are, however proportionately, more important to the individual than the permanent ones even, because disease or premature loss occures at a time when the child should be laying the foundation for sturdy health, and when suffering and neglect are not so well borne as in adult life, in addition to the adverse influence exerted upon the developing permanent teeth.

The first of the permanent teeth to erupt, and by far the most useful and important one is cut at the age of six to six-and a-half year. This is the first permanent molar, and erupts at the back of the dental arch behind all the milk

teeth and before any of them are shed' from its position and size, it is designed to bear the brunt of mastication, more especially during the period that the teeth are being changed. Frequently, due to lack of cleanliness, improper diet and failure to appreciate the tooth's great value, it is quite early the seat of decay. As it is commonly supposed to be a first tooth, its premature loss is not considered any great disaster by those who fail to recognise its immense importance. It is, nevertheless, the largest tooth of all, with long, deeply-imbedded roots, and placed in a position in the mouth of the greatest mechanical advantage; and when it becomes diseased, and is lost, it is indeed a disaster. Not only is the growing child deprived of its use, but its early loss tends to cause irregularities and crowding of the permanent teeth, a result which is not only unsightly, but which invites decay.

The early premature loss through decay or extraction of the temperory molars allow this large first permanent tooth to move forward in the jaw, so that when, later, between the tenth and twelfth years, the cheek teeth should replace these temperory ones, there is not sufficient room for them and they are forced out of the arch and an unsightly irregularity results, predisposing to caries.

This false and irregular position prevents the teeth from meeting properly those in the opposite jaw, and thereby not only is their usefulness greatly diminished, but they the more readily become diseased, as from their irregular position they are not cleaned during mastication, and are difficult to get at with a tooth-brush. Besides, never doing their proper work and getting insufficient exercise, they deteriorate and decay.

The permanent front teeth are cut next, between the seventh and eighth years, the members of this second set arriving in the month at interval till about the twenty-fifth year.

This completes the dentition, which involves the life of usefulness of fifty-two teeth, almost all of which have already started to form in the jaws of the baby before birth. In the young adult, twenty of these have vanished, leaving behind a lasting record of helpfulness or harm, depending upon how they were treated and cared for during their transitory occupation of the mouth. When the milk teeth are diseased or lost before their proper time, their permanent successors are placed, from the first, at a great disadvantage, for which there is no remedy.

One cannot fail, therefore to appreciate the tremendous importance and lasting effect on the mouth, teeth and system generally, of constant care and attention to these baby teeth from the very first, that none may be lost before their time, and all serious dental diseases and deformity largely prevented. At present, *dental inspection of school children* reveals the appalling fact that over *ninety per cent.* of the scholars between the ages of five and fourteen are dental many of them *hopeless and helpless.*

What we have to consider is;—If the teeth play so important a part in the well-being of the individual, why not save them? And how can they best be preserved in a healthy state?

One of the most helpful and simple factors in attaining this end is by keeping the teeth clean and free from all debris. They should be brushed regularly, with a

fairly stiff bristle *brush* and a reliable *tooth-powder*, which must be free from grit. The brushing should commence on the gums and come up on the teeth with a sweeping movement, in the direction of the length of the teeth, both above and below, inside as well as outside. The brush should be rotated when in use, so that the bristles will wipe all the small particles of food from the spaces between the teeth. Do not brush the teeth crosswise, as this rubs the gum away from the teeth and will, in time wear grooves in the teeth themselves. The masticating surfaces of the back teeth must also receive attention, those furthest back need brushing the most, and it is on these surfaces that caries often starts. Brushing the gums as well as the teeth is a habit to be aquired gradually. Start with a brush of medium hardness and go slowly at first, or the gums may become sore, Little by little the gums harden and get tougher, until the more they are scrubbed the better they feel, and indeed, the better and healthier they in reality become. Gradually brush harder and harder, and get to use brushes as hard as you can buy. Time may be lost at first trying to do things right, but soon a habit will be formed that is priceless,

The time at which it is most necessary to clean the teeth and mouth is B-d-Time. This ensures there being no scraps of food left to decompose around the teeth whilst the movements of the mouth and tongue are in abeyane during sleep. Next to bed-time the most important is the morning after breakfast. The ideal way, of course, is to cleanse the mouth after each regular meal as well as at bed-time. It is well to note that the habit of eating lunches and, worse still, sweetmeats between meals is even more hurtful to the teeth than it is to the general health.

As soon as a child has any teeth, it is important that they shohld be kept clean *and used*. Commencing at the age of two years, the child should be examined by a dentist accustomed to dealing with young children, at least every three months, so that any treatment necessary may be undertaken before the diseased condition that may be present has time to attain serious proportions.

This care and attention should be continued throughout school life. After the age of fourteen, when all the permanent teeth (with the exception of the " wisdom teeth") are in position in the mouth, a visit to a dental surgeon every twelve months, together with the continued attention to cleanliness, should be sufficient to ensure the mouth keeping healthy, unless discomfort should warn one that more frequent attention is required at any time.

To assist in the carrying out of this necessary habitual cleanliness of the mouth amongst school children, tooth-brush clubs should be established at all dental clinics.

Here good tooth-brushes and suitable tooth-powder should be obtainable at cost price. The dental nurse should also attend to give each child instructions as to the best way of cleaning the teeth. It might also, in some instances, be useful to establish branch clubs at some of the schools.

The treatment centre of dental clinics should be considered as but part of a scheme of General Dental Hygiene.

The curative treatment of dental

disease is carried out at the clinic and instructions given as to the care of the teeth and similar subjects.

But this is very far from all that is necessary. Constant care and attention to cleanliness and mouth hygiene is essential to keep the mouth in a healthy condition, and prevent the onset of disease, or its recurrence.

If the fingers or toes of the population began to ulcerate and decay, there would undoubtedly be a great outcry, and every available means adopted to cure and prevent such a catastrophy.

But the Teeth are more necessary to beauty and to *health* than are toes, and as they are allowed to get into a most seriously diseased state before any care is taken of them, when they have in a good many instances to be extracted at last.

Would we so calmly suffer the loss of any other part of our Bodies ?

"*Oral Topics*"

The Health of the School Child

by A WAY FARER

"The modern school programme with its over-use of the eye in reading, and of the hand in writing, coupled with the still more injurious neglect of the large muscles", says Prof. Terman, "constitutes a universeal menace to healthy growth. Children's bodies, in every bone, muscle, and vital organ, are likely to suffer in their development from the sedantary regimen of the school". Researches into the effects of school life upon the health of the children reveal a truly alarming state of affairs which can scarcely be looked on with any equanimity. According to Hertel and Schmid—Monnand's conclusions, there is a rise in general morbidity toward the end of the school-year, the increase being proportionate to the length of the school session. Binet's investigations indicate that the mental work of children bears an inverse ratio to their appetite. And as one who has made a thorough and comparative study of the subject, Schyuten maintains that admission into school is not infrequently attended by such a nervous disturbance as prejudicially acts against growth. As Sir George Newman, the Chief Medical Officer of the Board of Education remarks, we are sowing the seeds of physical impairment in childhood, the results of which we reap in adolescence and adult life.

THE PROBLEM, BEFORE US.

The problem that confronts the educationists therefore is how to counteract the baneful influence of the school upon the health of the growing child, so that he or she may not miss in future life the most essential element of all, a good physique and sound health. For one thing, it is clear that unless we hark back to nature and incline our children to a less artificial life than what they lead at present, giving ample scope for the play of the larger muscles of the body that are mainly operative in its development and perfection, very little can be attempted by way of adequate solution of the problem. Prof. Terman frankly recognises this, when he says, "We have taken the child out of his natural habitat of open air, freedom and sunshine, and for nearly half his waking

hours we are subjecting him to an unnatural regimen, one which disturbs all the vital functions". In the strong advocacy that he makes in the lecture on "My School" for 'ashrams' and for forest institutions of yore in which pupils could have constant communion with nature and disport themselves at will, Dr. Rabindranath Tagore seems to furnish a key for the solution of the problem · these are as essential for the evolution of the body as for the unfolding of the spirit.

OPEN AIR SCHOOLS.

The cry for open-air schools that now goes the round in the West is but a faint echo of the poet's demand. Yet it is apt to go a long way towards the prevention of illness among school children, as it supplies a prime need—fresh air, At the recent annual meeting of the Parents' Association held in London, Sir Bruce Porter who gave the address drove home the necessity for open-air schooling. "Open-air class-rooms should not be hard to provide", said he, "and with screens to protect from the rain it should be possible to do a great deal of teaching in shelters consisting of a roof only". At times out-door work in sunshine may be attempted, since it is found to be productive of immense good in cases of tuberculosis.

REST DURING THE DAY.

Another point that received proper emphasis in the address referred to is the provision of intervals of rest during the day, when children could go to sleep. "Children require much more sleep than adults and the hours of sleep shall never be sacrificed in favour of lessons. There should be intervals of rest during the day, and children should never be kept in as a punishment. It is often a great mental strain on the young to keep awake listening to instruction, as they must do if they will not risk punishment. Most headaches are due to eye-strain, and some children have varying degrees of 'word blindness.' "

MEDICAL INSPECTION.

There was an overwhelming volume of opinion with regard to the necessity for keeping an accurate health record for each pupil both prior to and after entrance into the school. The system followed at Marlborough in respect of this seems to be perfect : the parent of a pupil on the latter's entry is required to furnish a full report of his health in a form assigned for the purpose ; and whenever he subsequently absents himself, he must see the school medical officer before he comes back to the class. Advice is given in the case of convalescent pupils as to the kind of exercise he may resort to. The system entails the employment of a full-timed medical officer at the school ; but, how to find funds for the same in all schools is a problem by itself. The school medical services cost England in 1921-22 £1, 391, 606 but the figure would shoot up far higher, if each school were to be equipped with a separate medical officer.

NURSERY SCHOOLS.

"Out of an infant population born healthy, 35 to 40 per cent. of the children who are admitted to school at five years of age", says Sir George Newman in his report for 1922 "bear with them physical defects which could have been either prevented or cured, This is indeed a bad start on the journey of life". Such a result has been attributed to 'bad housing, poverty and absence of

hygienic provision'. To remedy this defect, welfare-centres and nursery schools have been opened at various localities where children under five are admitted and cared for, being placed, as they are under the supervision of the school medical service. These institutions, which have now met with official encouragement at the hands of Mr. Trevelyan, the Minister, are intended to be a chain of safety leading the child from birth to the elementary school and will considerably minimise the danger of imperfect health.

THE POSITION IN INDIA,

Our country is much to seek in point of facilities being provided for the proper upkeep of children's health at school. Our attitude in this respect is medeval; we do not look upon the child as possessing a 'body-mind' and hard it is indeed for us to get away from the Philistine conception of regarding the school strictly as a 'Lern-schule'. For long, weary hours our pupils are kept in dark, ill-ventilated school-rooms, with hardly any break for rest and repose. Burdened with heavy and unsystematic homework, they drudge at the exercises and poring their eyes out over their lessons, feverishly hasten to the school with a hurried bite of breakfast. Of recreation they know little and rarely with zest or zeal do they enter into the games of the evening; if time is spared at all for these, the thought of the morrow's work weighs like a nightmare upon them. And, worst of all it is the elementary school children that are most sinned against in this respect, enjoying as they do comparatively very few holidays and little opportunity for enlivening games.

The school medical inspection is in its infancy here; and even in localities where it has been conducted, it cannot be termed 'thorough'; rather it proves cursory and slipshod; the medical officer doing duty at the nearest hospital being generally engaged for this work, rushes through it in a hurry to save time, as he has many calls to answer. In many cases where treatment for diseases is recommended, the pupils could not avail themselves of it, the parents being too short of means to pay the doctor.

Our educators seem to think that with the teaching of hygiene and certain modifications in the slope and height of desks, the problem of the pupils' health can be satisfactorily solved; but these it should be remembered, are dismissed by Dr. Montesori as futile and unsatisfactory. It is verily sad to reflect that we are leagues behind England and America in this respect, there being no Parents' Associations, no National Leagues for Health and no School Medical Officers' Associations to take up on hand the important work of safe-guarding the children's physical well-being in our country. And the State too cannot come appreciably to our help, as its funds are too inadequate for the ever-open maw of the army and the services.

Oral Sepsis in Children

by Dr. H. S. DUNNING, B.S., M.D., D.D.S.

The mouth is the most unclean cavity, bacteriologicaly, with which we have to deal. It harbours over one hundred different varieties of bacteria and is subjected to greater trauma than any other region. Thermal changes in the food, hard and soft, medical agents, mechanical abrasion and poor dentistry give the ever present bacteria plenty to do. On account of the conditions mentioned above, the buccal tissues, including the maxillary bones and mandible, often become infected. There are, generally speaking, three methods in which infections may enter the deep tissues of the jaws: first the pericemental route, beneath the gingival flap; second, the intradental within the tooth, through the dental nerve, or pulp canal;

"*It is more difficult for the child to keep up his first line of defence against the enemy, infection, than for the adult. The resistance, as a rule, is not so good, and in the mouth the dental organs are in the developmental stage, with many irregularities that provide comfortable living quarters for bacteria.*" third, the hematogenous. The first two avenues are increased by the number of teeth present. In other words, the more teeth an individual has, the more susceptible he is to oral sepsis; for he has a greater line of defence to keep in repair. He has a larger area of gingival membrane to keep healthy, and he has more dental nerves or pulps that must be kept vital.

It is more difficult for the child to keep up his first line of defence against the enemy, infection, than the adult. The resistance, as a rule, is not so good, and in the mouth dental organs are in the developmental stage, with many irregularities that provide comfortable living quarters for bacteria. For this reason the average child finds it hard to keep his mouth clean. He is handicapped. The adult may appreciate the importance of oral hygiene; the child does not. The adult can often visit a dentist; the child can too, at times, but does he receive the proper treatment that he requires? This last question I shall try to answer later. For the reason given above, oral sepsis in the child is most common.

St. John Steadman states that eighty per cent. of all children suffer from oral sepsis, that is the most common of all diseases. He also belives that chronic disease in the child, the effects of which spread over a period of years, must have a profund influence on its mental and physical growth, and he shows that many systemic disorders are traceable to oral sepsis. He calls attention to the fact that

"*The average child finds it hard to keep his mouth clean. He is handicapped. The adult may appreciate the importance of oral hygiene, the child does not. The adult can often visit a dentist; the child can, too, at times, but does he receive the proper treatment that he requires?*". anaemia, general mental and physical deterioration and loss of weight are due to unclean mouths. Colyer, in 1910, I believe, was the first to weigh children before and after the removal of infected teeth. He found that there was frequent-

ly a marked increase in the weight of a child after extraction, and that this increase was too great to be ascribed to normal increase due to the growth of the patient. Rapid increase of weight does not always occur after the removal of the diseased teeth, as there may be other foci of infection that would have the same effect as infected teeth. He explains the loss of weight by the fact that children do not sleep well when dental irritation or pain is present. He has many charts and case histories to show rapid increase in weight upon the extraction of the septic teeth. He also says that proper mastication is lost, as the child will not use tender, painful, infected teeth, and either rufuses much of his food or swallows it before it has been properly masticated. The dental condition has often interfered with the sleep of the child for months unless the mother is observant, for tho child does not always complain. Colyer further explains the loss of weight by the fact that infected teeth cause gastro-intestinal disturbances, the main symptoms of which are gastric pain and diarrhoea of an offensive character. He also cites fretfulness, night terrors and loss of appetite which result in marked pallor of the face. He says : "if you take thirty children arranged in three groups, ten with all their teeth present and both teeth and mouth perfectly healthy ; ten with most, or all, of their teeth removed but their mouth otherwise healty, and the remaining ten with septic teeth and inflamed mucous membranes, it will be easy for the trained eye, aided if you like by the scales, to pick out the third group of children, but it will not be possible to seperate the other two." He goes on to say that the average physician is apt to treat the patient for gastro-intestinal troubles first without paying much attention to the patient's mouth. He cites the case of a child who was treated for gastritis for eleven months by a physician who disregarded the fact that the little patient had two badly abscessed molars. The gastritis cleared up shortly after their extraction.

"*The average physician is apt to treat the patient for gastro-intestinal troubles first without paying much attention to the patient's mouth ?*"

Dr. H. Walker calls attention to the effect of dental disease in nursing women. He says that in many instances the infant loses in weight when the mother has septic teeth. He goes into this question in detail and has about two hundred charts of cases showing that the infants generally gain weight upon the extraction of the mother's septic teeth. Dr, Walker says also that it is important to see that there is no septic material in the child's food and this can be done to a great extent by giving him a clean mouth.

Billing says ; "the focus of infection which undoubtedly causes the streptococcus viridans bacterimia and chronic malignant endocarditis is often from an alveolar abscess," Of this we have had numerous clinical examples. Coincident cultures from the alveolar abscess and the blood have yielded strains of the streptococcus viridans. When this nascent cultures were injected intravenously into animals, typical endocardial lesions have resulted. Billing says. further, that the deeper the infection is seated in the tissue and the greater the pressure of the accumulative bacterial products, the larger the amcuut of absorp-

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tion. The tissue in which the infection occurs is also important. Mucous membranes absorb easily. An abscess enclosed bone gives little chance for infiltration or extension : therefore, the pressure is great and the bactrial products are absorbed readily.`

On account of the fact that most deep dental apical infections are locked in the spongy vascular bone where there is poor drainage, I feel that dental infections often do more harm than infections of the tonsils, as the latter drain more freely. If there is a sinus, the pressure is decreased and the amount of absorption is diminished. When abscesses or other lesions discharge their exudates into the mouth, they reach different parts of the alimentary canal where a new focus may be formed, if the pus supply is long continued, but secondary lesions may in turn also become foci for further and more general infection. Such conditions must not be mistaken for primary causes, but should be removed so as not to prolong and intensify focal disease.

"*Dr. H. Walker calls attention to the effect of dental disease in nursing women. He says that in many instances the infant loses weight when thë mother has septic teeth, and generally gain weight upon the extraction of the mother's septic teeth.*"

We may also have other conditions, such as pharyngitis, otitis media and miningitis, formed through continuity of tissue, Some clinicians do not pay much attention to swollen submaxillary glands in children. Chronically swollon glands are a distinct detriment to the child. Such glands often remain large for a long time, become tender readily, and do not function as well as normal glands. Such glands are a handicap to the patient, and these damged organs are likely to break down at a later date if untreated. We should find out from whence the infection comes and remove its source, whether it be in tonsils, the teeth or elsewhere ; they often come from the teeth. Lymph drainage of the teeth and jaws is important.

Cleanliness will prevent oral sepsis, but cleanliness in the average chiild is a hard thing to obtain and to maintain. Many children have a bad start as regards their teeth. Many mothers wash their children's hands oftener in one day than they do their teeth in a week, and I believe that dirty hands are less dangerous then a *dirty mouth*. It is a tedious and irksome procedure to clean the teeth of children ; to obtain the best results, one must make a sort of game of it, and the parent must at times offer prizes for the cleanest teeth each week. The child must become familiar with the toothbrush almost as soon as the first teeth appear. The parents must see to it that the teeth are brushed carefully twice a day at least, and it is dangerous to leave it to the nursemaid, however trustworthy she may be, At an early age, say, three to four years, the child should be introduced to another nurse who, we hope, is going to reduce the amount of oral sepsis by one-half, The nurse I have reference to is the dental nurse, the majority of whom clean teeth much better than the average dentist, and can handle these little tots more easily than can mere man. Children should be taken to the dental nurse or the oral hygienist twice a year, and if this habit is started early they become so accustomed to the appearance of a dentatl office that it never holds any terrors for them.

"*The child must become familiar with the toothbrush almost as soon as the first teeth appear. The parents must see that the teeth are brushed carefully twice a day at least, and it is dangerous to leave it to the nursemaid, however trustworthy she may be.*"

Many believe that pyorroea can be prevented absolutely if patients receive early and regular treatment at proper intervals all their lives, and that dental caries can be prevented to a great extent. It should be our endeavour to prevent dental nerves or pulps ever becoming infected. We should not allow teeth to become non-vital, for as yet a vital tooth does not enter into the pathology of the mouth. We can prevent all these conditions in the children of the rich. It is being done every day. But what is being done for the poor? What kind of dentistry does a poor child in a large family get? He gets no preventive treatment, and is lucky if he gets to a clinic in time for extractions before he is in pain, and he is so fortunate if, when he gets there, he receives the proper treatment in a way that does not strike terror to his poor little soul and makes the operator forever his enemy. We need clinics and more clinics for children.

Our chief problem is what to do *now* to help the child. The treatment of these conditions is surgical. It takes considerable courage to condemn many teeth in a child, and I believe the most dentists lack this courage to a great extent. There is poor co-operation in this direction between the dentist and the physician. He wants to wait until the "swelling goes down". It happens also that the physician tells the dentist to wait until the child "gets better". Neither is anxious at times to take the reponsibility, and between the two there is nothing done until the infection has gained considerable headway and a good deal of damage has been done. A virulent tooth infection can cause much destruction in a short time.

Children as a rule take gas poorly, and few approve of this anaesthetic for very young ehildren. I believe the open mask with ethyl chloride spray or ether with the tin mask is the better plan. Less naucea and vomiting will result if the anaesthetist is particular about the amount of anaesthetic used, and frequently the patient can be sent home in an hour or two. Deciduous teeth sometimes infect the permanent and great care must be taken to get good drainage for the erupting second teeth and to drain the surrounding bone and soft tissue. Care should be taken in extracting the first teeth not to injure the second teeth just below or just above, as the case may be. I wish to make a plea for a great dental infirmary in this city of the lines of the Eastman and the Forsyth clinics, where all kinds of preventive treatment can be given for these mouth conditions.

New York Medical Journal.

Correspondence

Tooth-Powder *vs.* Tooth Pastes

by Dr. PHIROZ, B. D., Rana Dental Surgeon, Tower, Surat

The use of fashionable tooth powders and tooth-pastes is a perfect rage of this civilised age. People, calling them civilised, think that only these things can keep their teeth in pink condition, hence more often than not the use of a tooth-brush is totally neglected. But they don't understand that a tooth-brush is the most necessary instrument for cleaning one's teeth and that powders and pastes are only intermediaries to protect the gums and soft tissues from the undue hard use of the brush. Besides they are only meant to give the mouth a good odour.

I for myself never believe in powders or pastes that claim to cure pyorrhoea or other disorders of the mouth and teeth. An eminent dental specialist says that only fresh water and a hard brush are enough to clean one's teeth.

I wonder why people go in for the pastes so long as they get powders. It is well-known that pastes are nothing but powders mixed with glycerine, vaseline or syrup, all fermentable things, put in a fashionable tube. Why should such harmful ingredients be added to an innocent tooth-powder ? If a powder contains chalk, electrically ground and an oil or two, that's sufficient. If a hard brush, with unequal bristles be employed, it will never allow chalk to lodge between the teeth and irritate the gums. Moreover, you can more easily wash out a powder from your mouth than you can the paste. Not only are glycerine, vaseline and syrup sticky things but also being sweet and fermentable, they would encourage the formation of Lactic acid very rapidly. I have always found my patients using pastes having a yellow film near the necks of their teeth. Very aptly an american authority cried in utter indignation, "Damn the tooth-pastes, damn the mouth washes."

For my part I am quite against the use of tooth-pastes; mouth-washes are also only to be used when directed by your dentist. The best way to clean the teeth is to use a *hard* un-equal-bristled tooth-brush (in some cases *medium*) to be used up and down and a tooth-powder containing precipitated chalk and oil of cloves or if you like any other oil of fine odour. Owing to the latest discoveries, baval or lim sticks should be given a wide berth as they cause or encourage caries.

The All-India Naturopathic Conference

at Belgaum in December 1924

I have grert pleasure in drawing the attention of the public to the fact of the existence, for over 7 or 8 years, of a widespread organisation in the Andhra Desa by name "The Indian Naturopathic Association", for the propagation of the principles and philosophy of "Nature Cure", and for the popularisation of the Naturopathic Systems of 'treatment. A Telugu Monthly Journal, by name

"Prakruti", has been regularly working in the province for over half a decade, teaching and recommending the principles and the methods of "Nature Cure". More than one system of "Nature Cure" has made much headway among the people, viz. Babbit's "Chromopathy"; Kuhne's "New Science of Healing"; Just's "Return to Nature"; "Diet Cure"; "Fasting Cure"; "Breath Cure" etc.; and it would be no exaggeration to say that they can now compare themselves favourably with any other system of therapeutics, as much in popular favour as in the effectiveness of the cures produced.

Looking at the history of modern Naturopathy, we find that it is the fruit of the deep and clear insight into the heart of Nature; yielded by centuries of extensive scientific research carried on by the veterans of Europe and America. Naturopathy is grounded in that intimate knowledge of Human Nature and of the Laws of Human Welfare, which is the result of investigations into Anatomy, Physiology, Psychology, Ethics, Metaphysics, Hygiene, Sanitation, Dietetics, Pathology, Pedagogy, Criminology, Sociology, and a host of other allied sciences bearing on the Life, Activity and Welfare of the Human Being. The strict observance of the Human Welfare, revealed by this fundamental knowledge, is, in varying degrees, relied on by all systems of treatment; but with this difference that what may be compactly termed as the "Non-Naturopathic" systems, recognise its undoubted efficacy only for the *Prevention of Disease*, and believe that, for Remedial Purposes in the case of diseases that have actually broken out, some drug, electricity or other artificial external agency or force is indispensable to set matters right. In contra-distinction with this class of remedial systems, Naturopathy holds that Nature is immensely beneficent, powerful, and thoroughly reliable. Naturopathy declares that the same laws which prevent disease also cure it when it has once broken out; "Disease" being, in its eye, only an act of the Constitutional Vitality in cleansing the individual system of all morbid, abnormal or foreign things or influences present therein. Disease, therefore, is only an undoubted GOOD in temporary disguise, sure to work itself out quickly into a state of perfect health and happiness. Naturopathy has unlimited faith in the Beneficence and Self-Sufficiency of Nature and holds all artificial agencies as not only unnecessary but even harmful when they tend to obstruct, suppress, exhaust or otherwise disturb the spontaneous processes of Nature. Naturopathy recognises no physician or remedial agent other than Nature itself. This changed-outlook on Nature is not merely a revelation to the Healing Profession, but is certain to revolutionise Human Life, Effort and Culture by instilling an inexhaustible Self-Reliance and Optimism thereinto; as man will no longer look upon Nature as an enemy to be put down or as an ass to be cleverly harnessed, but as an omniscient and merciful Mother to whom everything may be safely trusted. The successful propagation of Naturopathy in the country incidentally educates and disciplines the people in the necessary requisites; *viz*., an elementary knowledge of the fundamental truths of the several Sciences bearing on human life, activity and welfare; and a steady faith in the

immense beneficence and self-sufficiency of Nature, coupled with a constant effort to regulate one's life into perfect unison with Nature. The perfect self-dependence of the patient, and the simplicity, cheapness, naturalness and universal availability of Naturopathic remedies are the great advantages of Naturopathy.

It must, however, be observed that most of the Naturopathic systems above referred to, are of European or American organ, being the products of Modern Science, and have been only recently introduced into this country with the influx of Western Culture and Civilisation. We ought not, however, to ignore the prominent fact that there is a large variety of indigenous Practices and Systems of Treatment (religious and otherwise), based upon wonderful knowledge of the workings of Nature and frequently commanding therapeutic results far beyond the dreams of Modern Science. In the interests of the medical advancement of the Human Race, it is greatly necessary that, by assiduous and intelligent research conducted under the auspices of a liberal national patronage, these indigenous Practices and Systems which seem to be of immense Naturopathic significance, should be studied and interpreted in the light of Modern Science, and reclaimed from the ruin and oblivion into which they have, of late, been practically sinking away owing to a multitude of adverse circumstances.

Many sympathisers of the Naturopathic movement in India are sincerely of opinion that the time has come when all the private and isolated efforts of the large army of earnest gentlemen working in different parts of the Country for the propagation of Naturopathy, should be co-ordinated and focussed into a public and national movement, which alone will be capable of realising the true goal of Naturopathy in this land. It is only then that Naturopathy can gain for itself as it well deserves, the highest place in the estimation and popularity, confer its inestimable blessings on the nation by vitalising, purifying and strengthening its body, mind and morale.

In order to bring about such a nation-wide cordination of the Naturopathic work in India, a nucleus of a national society under the title of "The All India Naturopathic Association" has been organised at Bezwada, and vigorous attempts are now being made to convene, with the earnest and liberal co-operation of Veteran gentlemen already in the field throughout India, an *All India Naturopathic Conference* at Belgaum in December next during the ensuing session of the Indian National Congress.

I take this opportunity of inviting on behalf of the Association, all sympathiseres and workers in the field of Naturopath wheresoever they may be, to co-operate with us in this worthy and noble cause for the uplift of our Country, and to make the proposed Conference at Belgaum a grand success by giving us their most valued help in such way as they think fit.

K. W. BHAIRAVAMURTY, B.A.,
President,
The All India
Naturopathic Association

Bezwada,
15-10-1924.

School Hygiene

The importance of this subject to modern condition of schools and school childern in a civilized city cannot be over estimated. As a matter of fact, school Hygiene has been engaging the attention of the authorities more than personal Hygiene of school children, with the result that several codified Laws and Regulations have to be met and satisfied before the school, private or public, is "recognised" as the institution fit to receive govenment help-initial or recurrent. But it is a great pity that authors of these have failed to use their commonsense in leaving a certain Margin and discretion to the respective local authorities themselves to see that the end in view viz proper Health of the individual is attained. For a school in a slum in Madras cannot be built in same model as on the top of a hill at Lovedale but the rule has been made a rule for all city or moffusil.

But this fact is being given a little attention now-a-days viz that the student should receive and not be deprived off for more than a certain length of time the chief elements on which his health depends viz Plenty of fresh and free air water and sunlight. The school should be held as far as possible in open air, under the shades of trees or in the Verandahs, and if kept in closed or even open rooms, students should be sent out to open air now and then. It is also important that the Students must not be allowed to sit in same posture for more than half hour and the benches and desks must not be too high nor too low.

(To be continued.)

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